

Ser. No. 09/941,884

2

60003206-1

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (Canceled)

2. (Previously Presented) A diagnostic method for visual detection of poor media advance calibration in an ink-jet printing system, comprising:

entering a diagnostic mode of the printing system in which mode normal printing jobs of the printing system are not printed;

printing different areas of a diagnostic pattern at different passes of one or more ink-jet printheads with a controlled amount of media advances between the passes, to accumulate media advance error between the printing of the different areas; and

examining the diagnostic pattern to determine whether the accumulated media advance error is sufficiently objectionable to take corrective action; and wherein said printing different areas comprises:

printing a first area comprising a first set of pixels printed during a first pass;

conducting a plurality of incremental media advances;

printing a further area comprising a second set of pixels printed during a further pass, wherein media advance errors resulting from said plurality of media advances are accumulated between printing said first area and printing said further area.

3. (Currently Amended) ~~A diagnostic method for visual detection of poor media advance calibration in an ink-jet printing system, comprising:~~

Ser. No. 09/941,884

3

60003206-1

~~\_\_\_\_\_ during a diagnostic mode of the printing system in which normal printing jobs of the printing system are not printed, printing different areas of a diagnostic pattern at different passes of one or more ink-jet printheads with a controlled amount of media advances between the passes without any intervening printing of a normal print job, to accumulate media advance error between the printing of the different areas~~ The method of Claim 2, wherein said different areas are nominally aligned along a horizontal line; and

~~\_\_\_\_\_ examining the diagnostic pattern to determine whether the accumulated media advance error is sufficiently objectionable to take corrective action.~~

4. (Currently Amended) ~~A diagnostic method for visual detection of poor media advance calibration in an ink-jet printing system, comprising:~~

~~\_\_\_\_\_ printing different areas of a diagnostic pattern at different passes of one or more ink-jet printheads with a controlled amount of media advances between the passes without any intervening printing of a normal print job, to accumulate media advance error between the printing of the different areas; and~~

~~\_\_\_\_\_ examining the diagnostic pattern to determine whether the accumulated media advance error is sufficiently objectionable to take corrective action~~ The method of Claim 2, wherein said step of examining the diagnostic pattern is conducted visually by a user.

5. (Currently Amended) The method of Claim ~~[[4]]~~ 2, wherein said step of examining the diagnostic pattern is conducted by an optical sensor comprising the printing system.

Claim 6 (Canceled)

7. (Currently Amended) The method of Claim ~~[[4]]~~ 2, wherein said step of printing different areas of a diagnostic plot includes:

Ser. No. 09/941,884

4

60003206-1

applying a diagnostic multi-pass print mode mask, wherein a plurality of carriage passes are employed to print the area subtended by a printhead nozzle array, the diagnostic print mode mask comprising a rectilinear grid of pixels, with each pixel location having a number associated therewith, the number representing the pass in which the pixel will be printed, and wherein said different areas include a first set of pixels on a row of said grid, and a second set of pixels on said row, and wherein said first set of pixels is printed on a different pass than said second set of pixels is printed.

Claim 8 (Canceled)

Claim 9 (Canceled)

Claim 10 (Canceled)

11. (Previously Presented) A diagnostic method for visual detection of poor media advance calibration in an ink-jet printing system, comprising:

providing an ink-jet printhead mounted on a carriage, the carriage mounted for movement along a scan axis;

providing a media advance system for advancing a print medium along a media path which is transverse to the scan axis;

entering a diagnostic multi-pass print mode in which mode normal printing jobs of the printing system are not printed;

printing different areas of a diagnostic plot at different passes using said ink-jet printhead with a controlled amount of media advances between the passes to accumulate media advance error between the printing of the different areas; and

examining the diagnostic plot to determine whether the accumulated media advance error is sufficiently objectionable to take corrective action; and

wherein said printing different areas comprises:

Ser. No. 09/941,884

5

60003206-1

printing a first area comprising a first set of pixels printed during a first pass;

conducting a plurality of incremental media advances;

printing a further area comprising a second set of pixels printed during a further pass, wherein media advance errors resulting from said plurality of media advances are accumulated between printing said first area and printing said further area.

12. (Currently Amended) The method of Claim ~~40~~ 11, wherein said different areas are nominally aligned along a horizontal line.

13. (Currently Amended) ~~A diagnostic method for visual detection of poor media advance calibration in an ink-jet printing system, comprising:~~  
~~— providing an ink-jet printhead mounted on a carriage, the carriage mounted for movement along a scan axis;~~  
~~— providing a media advance system for advancing a print medium along a media path which is transverse to the scan axis;~~  
~~— entering a diagnostic multi-pass print mode;~~  
~~— printing different areas of a diagnostic plot at different passes using said ink-jet printhead with a controlled amount of media advances between the passes to accumulate media advance error between the printing of the different areas without any intervening printing of a normal print job; and~~  
~~— examining the diagnostic plot to determine whether the accumulated media advance error is sufficiently objectionable to take corrective action~~ The method of Claim 11, wherein said step of examining the diagnostic pattern is conducted visually by a user.

14. (Currently Amended) The method of Claim ~~40~~ 11, wherein said step of examining the diagnostic pattern is conducted by an optical sensor comprising the printing system.

Ser. No. 09/941,884

6

60003206-1

Claim 15 (Canceled)

16. (Currently Amended) The method of Claim ~~40~~ 11, wherein said step of printing different areas of a diagnostic plot includes:

applying a diagnostic multi-pass print mode mask, wherein a plurality of carriage passes are employed to print the area subtended by a printhead nozzle array, the diagnostic print mode mask comprising a rectilinear grid of pixels, with each pixel location having a number associated therewith, the number representing the pass in which the pixel will be printed, and wherein said different areas include a first set of pixels on a row of said grid, and a second set of pixels on said row, and wherein said first set of pixels is printed on a different pass than said second set of pixels is printed.

Claim 17 (Canceled)

Claim 18 (Canceled)

Claim 19 (Canceled)

Claim 20 (Canceled)

Claim 21 (Canceled)

Claim 22 (Canceled)